

Clinical Medicine

LEADING ARTICLES

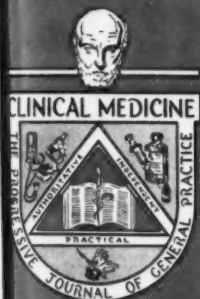
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VOLUME 52

NUMBER 12



DECEMBER
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VOLUME 52

DECEMBER, 1945

NUMBER 12

Psychoneurotic Aspects of Gastro-Intestinal Diseases*

By C. T. STONE, M.D.,† Galveston, Texas

TODAY we are revising our clinical concepts of psychosomatic problems. One cannot separate psyche (mind) and soma (body). One must consider them together in ill health, and this is especially true in gastro-intestinal diseases, as the gastro-intestinal tract is the oldest phylogenetic system. It is richly supplied with sympathetic and para-sympathetic fibers so that the tract is influenced by impulses from the brain transmitted through hypothalamus.

Functional complaints are more frequent with those who have relatives in the armed forces. Over half of the patients complaining of gastro-intestinal symptoms have no organic findings.

It is useless to tell the patient to take it easy and forget the symptoms. One must search into the patient's emotional life for the cause and treat it. Stimuli from the nervous system are carried to the gastro-intestinal tract and result in upset function. The hypothalamus also sends stimuli to the endocrine glands which changes body function.

Long continued conflicts may cause symptoms which mimic digestive diseases, such as peptic ulcer, very closely. These symptoms are not imaginary but are abnormal functioning due to abnormal stimuli.

They are not minor or unimportant because they lead to inefficiency, demoralization, nutritional changes due to inability to take a normal diet, and nutritional deficiency states. These patients are not insane, "screwballs" or crackpots.

One can frequently make a diagnosis of psychoneurosis after taking the history and physical examination. The patient does not appreciate the effect of the emotions on the organs even if he is aware of emotional conflicts.

The physician must explain causes and effects, then give advice on how to overcome the conflict.

Gastro-intestinal symptoms are due to: 1. Motor effects, 2. Sensory effects, 3. Secretory effects.

Common Psychoneurotic Complaints

1. A right lower quadrant pain misdiagnosed as "chronic appendicitis."
2. Left upper quadrant pain called "heart disease" or "pain under my heart."

*Notes taken by R. L. Gorrell, M.D. at a War Time Graduate Meeting, McCloskey General Hospital, Temple, Texas, May 16, 1945.

†Chief, Department of Medicine, University of Texas Medical School.

3. "Peptic ulcer syndrome" with spasm of the pylorus.
4. "Gas," including air swallowing, bloating, borborygmi and flatus.

Typical Case Histories

1. A woman of 57 whose complaint was that she could not eat solid food. A hypochronic anemia and dilated esophagus due to spasm of the esophagus, by cardiospasm, were found. Her child drowned in a hurricane two years previously. No dilation of the esophagus was permitted because the spasm was a psychic memorial to her child.

2. A married woman of 49 had low abdominal discomfort, gas, weight loss (20 lbs. in 6 months) and "pressure on the heart" for six months. She appeared ill and was 43 lbs. under her normal weight. Tenderness was found in the lower abdomen and a decending lower colon could be felt. Physical examination was otherwise negative. X-ray showed spastic transverse and decending colon.

Her son had been ill in an army hospital for seven months, causing her much worry. After the basis of her symptoms was explained, she gained 19 lbs. and continued to improve after her son had recovered from his illness.

3. A married woman of 25 complained of left lower quadrant pain and of being "a nervous wreck." An appendectomy and bilateral salpingectomy had been performed six months previously to relieve this pain. Physical examination showed tenderness in the lower abdomen, especially in the left lower quadrant. All other physical and x-ray examinations were negative. She weighed 84 lbs. as compared with the ideal weight of 117 lbs. It was learned that she had been married at the age of 15 and to a man much older than she was. She became pregnant at once and had her only child at the age of 16. She was "ill" for months after the birth of her child. Despite the fact that the husband and wife were devoted, she felt very sensitive about her childhood marriage and felt insecure and was afraid that her husband would lose his love for her.

4. A married woman of 35 complained that she had been nervous all her life. Other complaints were weakness, exhaustion, fear of cancer or tuberculosis because she felt so badly. The uterus had been removed a year previously because of small fibroids and she had felt worse since that time. All x-ray and

laboratory examinations were negative. The patient was emotionally unstable, cried frequently, and had never been well-adjusted. No libido or potentia had been present since the hysterectomy and this caused the patient concern because she felt that her husband would lose his affection if he knew of it. She responded incompletely to treatment.

5. A single girl of 19 complained of abdominal pain, bloating, attacks of migraine, and weakness. She was pale and apparently undernourished. She was very fond of her father who died of cancer of the stomach when she was 15 years old. Following this her mother pampered the daughter, until the mother died of cancer of the rectum. Physical and laboratory examinations were negative. After explanation of the cause of her symptoms the patient improved somewhat but gastro-intestinal symptoms are always present and she is physically and emotionally inadequate. Such a patient is a constitutional psychopathic inferior and the prognosis is poor.

6. A married woman of 37 had indigestion for 14 years unrelieved by appendectomy. She complained of heaviness in the stomach after eating, abdominal burning, constipation, and nervousness; diffuse tenderness over the abdomen, irritable colon, and a gall stone were found on examination. She was troubled with anxiety and did not respond to 16 months treatment. The gall stone was removed without effect on her symptoms.

7. One must differentiate between a mild psychosis and mild depression for which other treatment is indicated. A 40 year old worker in the oil fields complained of many gastro-intestinal symptoms which did not respond to treatment for psychoneurosis. Gradually it became evident that he had a mild depression for which electro-shock and other treatment was given with prompt cure and he had remained well for two years thereafter.

8. One should never take anything for granted, even if the patient is obviously psychoneurotic. A man 70 years old complained of frequent abdominal symptoms. He was examined repeatedly, including careful gastro-intestinal x-rays, the final diagnosis being psycho-neurosis. Finally he lost 30 lbs. in weight, could not eat, complained of sore mouth and increasing constipation. A negative barium enema study was made at this time. Pellegra was diagnosed but no response was ob-

tained to vitamin treatment and a high vitamin diet. Later a normocytic, normochromic anemia appeared. Exploratory operation revealed an inoperable cancer of the colon.

Treatment

Hospitalization is one method of treatment. The patient soon learns what conditions other patients have and the intelligent individual figures that he is not so badly off.

One should restore proper nutritional status. The over-weight person should be reduced and the under-weight person should be brought up to normal weight. Many of these patients have tried a number of diets which are deficient in vitamins and minerals and harmful results have followed. Do not tell these

patients to rest as they are not physically tired.

Corrective treatment includes:

1. *Rapport* (harmonious relationship, friendship, between physician and patient).
2. An explanation of what is wrong may be very effective.
3. Let the patient talk about his ideas and reactions.
4. The use of suggestion is often helpful.
5. Desensitize the patient to remarks and attitudes of other persons.
6. Reassurance must be definite.
7. Teach the patient the value and necessity of compromise.
8. Training, education, and stabilization are required.
9. Avoid needless surgery.

Common Mistakes in General Practice

(Confusion of Intestinal Obstruction with Appendicitis)

What is the cause of crampy abdominal pain, vomiting and constipation, without fever, leukocytosis or abdominal tenderness?

"One of the most common mistakes is the confusion of intestinal obstruction with appendicitis. Patients will complain of cramp-like, colicky abdominal pain for several days, but because their white cell count is normal, temperature is nor-

mal and there is no right lower quadrant tenderness, the diagnosis of mild, subacute appendicitis is made. Intestinal obstruction is not diagnosed until marked abdominal distention, vomiting, fast pulse and a seriously ill patient are observed." (Letter by William F. Rienhoff, Jr., Surgeon, 1201 North Clavert St., Baltimore, 2, Maryland to editors of CLINICAL MEDICINE.



NO FEVER

98°



CRAMPY
ABDOMINAL PAIN,
BUT NO TENDERNES
ON PALPATION.

Ambulatory Electroshock Therapy

Its Employment for Patients Seen by the General Practitioner

By FREDERICK L. PATRY, M.D., Albany, N. Y.

A REGRETABLY large number of patients are being treated merely symptomatically (hypnotics, analgesics and cerebral stimulants such as Benzadrine Sulfate and Dexedrine) for pathological depressions and mental illnesses of varying degree and type by general practitioners with very discouraging results. Unfortunately, most of my patients have "made the rounds" of physicians and surgeons for many weeks or months, and occasionally for years, but with little relief. This has been unduly costly in terms of time loss from work, misery, inefficiency, financial drain, lack of social usefulness and enjoyment, and on occasion the supreme sacrifice of life itself as an escape from what seemed to the patient an insuperable impasse to thoughts of ever being well enough again to give life a sense of worthwhileness.

The psychiatrist has now available an effective "psychic operation" which surpasses the successful results of any major surgical operation. Electroshock ("electric sleep") therapy is a long-sought answer (not final of course) to a host of mental illnesses which formerly took months and years to recover from, by traditional, conservative measures.

Now, with this truly phenomenal instrument in the experienced hands of the specialist in neuro-psychiatry, the patient may get well, in over 80% of cases, while he works and lives at home in most of the early and moderately severe mental illnesses which experience has shown respond to electroshock treatment. Many of the severer cases, the psychotics who have exhibited dangerous tendencies regarding life (their own or others) and who lack a home with cooperative and understanding friends or relatives, will still need the unquestioned advantages of a hospital, be it a state hospital or private sanitarium.

Privately treated ambulatory patients seem to respond better to electrofit therapy than do clinic patients treated in hospital residence. Many of these institutions now have available electroshock therapy. This has largely replaced insulin shock and metrazol convulsive ther-

apy, chiefly because of the equally good, or even better, in some illnesses, results of electroshock, its saving in time, cost, and in personnel. Moreover, it's hazards are minimal with much less danger than having one's tonsils out. To date, many thousands (at least 100,000) of treatments by electric shock have been given without deaths. There has, however, been a very occasional death (usually due to myocardial failure caused by coronary insufficiency, sclerosis, or occlusion). Fractures of bones (vertebrae—mostly compression or chip fractures, long bones, especially the humerus and femur, scapula), dislocations (chiefly of the jaw) and sprains have also been reported. Malzberg³ reports that only 14 of 491 (a rate of 2.9 per cent) treated with electric shock suffered any injury including one reactivation of minimal pulmonary tuberculosis. In this article, the writer is speaking from one and one-half years of ambulatory electroshock treatment experience given in his private office practice. The office is an integral part of his residence.

Illnesses Not Benefited

What types of nervous and mental diseases may profit by or need electroshock treatment? Not all mental disorders are amenable to shock or convulsive therapy. Chief among this group which do not materially or essentially benefit by shock therapy are the organic or neurogenic psychoses. For example: 1. Psychoses due to infection, (a) syphilis, (b) tuberculosis, (c) meningococcus or (d) other bacteria or virus causing meningitis, encephalitis or chorea; 2. intoxication, (a) alcohol, (b) drugs, (c) metals, (d) gases; 3. trauma; 4. disturbances of circulation, (a) cerebral arteriosclerosis, (b) cerebral embolism, or (c) cardio-renal disease; 5. convulsive disorders; 6. senile psychoses; 7. metabolic and endocrine gland disorders; 8. exhaustion and nutritional disorders such as pellagra; 10. new growths; 11. multiple sclerosis; 12. paralysis agitans and 13. other brain or nervous system diseases. (a) hereditary, (b) degenerative or (c) infectious are not significantly helped by electroshock treatment.

However, associated affective components, such as depression, agitation, perplexity, marked fear, anxiety, excitement

*Formerly psychiatrist in the New York State Education Department and Associate in Psychiatry, Albany Medical College. He is the author of "Mental Health: Its Principles and Practices."

or elation, euphoria or manic states, with organic, toxic or infective psychoses may benefit by electroshock as a symptomatic treatment of the emotional factor. Obviously, treatment in these diseases should primarily be directed toward removing or rectifying the underlying causes whenever possible, e.g. alcohol, removal of infecting organism or toxic agent, adequate nutrition and vitamin content, thyroidectomy (should thiouracil prove ineffective), somatic disease and so on with adequate attention to environmental and psychogenic stress and strain contributing factors.

Indications

The types of illnesses which benefit most from electroshock are the pathological depressions and involutional melancholias. Schizophrenias (*dementia praecox*) are greatly benefited although statistics give insulin shock therapy a somewhat higher rating, especially in chronic cases. Severe reactive depressions of the psychoneurotic group as well as those having marked anxiety, obsessions, compulsions, tension states, perplexities and hypochondriasis with depressive features have been helped.

The psychosomatic complaints usually disappear when the mood disturbance giving rise to the symptoms is "washed out" by the electric shocks given in adequate number and spacing. Paranoid and paranoid conditions, manic-depressive (depressed, manic or mixed) types of illnesses, depressive, anxiety and tension states of the involutional, early cerebral arteriosclerotic and presenile period are particularly responsive to treatment. Emotional hypertension may be ameliorated.

Some report encouraging results in the treatment of drug and alcoholic addiction, and others in the treatment of epilepsy (idiopathic type). Severe psychoneuroses, with the exception of the hysterical group, have been significantly benefited.

Electroshock therapy (or other shock or convulsive therapy) does not correct psychopathic personalities (except for episodes of excitement or depression or paranoid factors), mental deficiency (except for affective components) or primary behavior disorders (habit and conduct disorders or neurotic traits). Persistent sneezing and persistent hiccough have been reported on favorably where other measures have failed. Likewise acute grief reactions following bereavement, disaster or severe disappointment have been quickly lifted by the pain-

less, quick-working electroshock treatments.

Contraindications

Contraindications to electroshock treatment are severe myocardial damage if resulting in cardiac decompensation, active or recently healed pulmonary tuberculosis or other disease of the lung, acute infection, febrile disease, serious systemic disease and marked chronic organic changes of the central nervous system. Osteoporosis or faulty bone formation may give rise to fracture and, of course, this hazard increases with old age. However, patients in their seventies and eighties have been treated successfully with electroshock in selected cases. Naturally, careful selection as well as critical and trained experience in technique and medical judgment cannot be over-emphasized.

Method

The method of giving electroshock therapy varies somewhat in the hands of different neuropsychiatrists. Details of technic will not be given here. Suffice it to say that one or more assistants to the psychiatrist is necessary and the use of a restraining canvas or its equivalent in controlling the convulsive movements of the patient. Curare and intravenous sodium amytal prior to the electrofit have been used to good advantage by many in reducing or abolishing the convulsive muscular strain which has militated against the use of shock therapy in those susceptible to fracture, dislocation or undue cardiac or pulmonary hazards.

The number of treatments vary. The average is eight for pathological depressions, and twenty or more shocks in the treatment of the schizophrenias. Manic excitements may require two or three shocks a day at first. Improvement in depressions should not be generally expected until after the fourth treatment.

The patient is usually given the treatment in the morning since he is not allowed breakfast or food prior to treatment. The patient has been placed on the treatment table or couch and the back arched forward with a sand or triangular pillow in order to protect the vertebrae from undue pressure during the convulsion. Gauze covered electrodes are moistened in saline solution, applied bilaterally in the frontotemporal regions, and retained by an elastic rubber band. Assistants hold the shoulders firmly in a downward and inward direction; the lower jaw is firmly supported upward after a rubber gag has

been placed between the teeth or gums (dentures are removed). Hair pins, earrings, necklaces and other metallic materials are removed from the head and neck regions.

Following the application of the current (one-tenth to three-tenths seconds duration regulated through an automatic timer, and 90 to 150 volts, regulated to produce a grand mal type of convulsion) the patient becomes unconscious immediately, goes through the tonic and clonic phases of a grand mal convulsion, then remains unconscious for five to ten minutes. This is followed by a deep sleep; then gradual arousal or "coming to" some 20 to 30 or more minutes after the treatment begins. The patient is allowed or encouraged to rest on the treatment couch, or in a bed to which he may have been transferred, for an hour, more or less. He should lie around and take it easy for another hour or two after going home. He is always accompanied, for the first time at least. Certain patients may return to their usual occupation the afternoon of the day of treatment. Treatments are usually given on alternate days, averaging three times a week.

Usually, the patient does not object to subsequent treatment as the treatment is devoid of pain (although mild muscle ache may be present due to contraction of muscle groups not usually used), and there is complete amnesia for the treatment period. There is a temporary memory deficit but this faculty always returns to normal in a few hours, days or in rare instances a period of weeks.

The *modus operandi* of electroshock treatment is unknown. It apparently is due to a combination of factors—physicochemical, physiological, organic and psychological. It is admittedly an empiric form of therapy but decidedly well out of the experimental stage. In proper hands, it is welcomed as a safe, economizing and convenient method of treatment in certain mental disorders. Its availability has vitalized psychiatry. It should be kept in mind, however, that other forms of psychotherapy should also be used hand in hand with and following electric shock treatments. Often, electroshock therapy merely serves the important function of making the patient accessible to a much needed long-range period of personality analysis and reconstruction.

Results

As has been indicated above, the results of electroshock therapy in combination with psychotherapy and other re-

medial measures is very gratifying. About eighty to ninety per cent of pathological depressions and involuntal melancholias are fully recoverable in two or three weeks time—or at least a social and occupational recovery. Schizophrenias require a longer period of treatment but remissions ("recovered—much improved") are reported in early cases, those ill less than six months, in sixty-eight per cent; forty-one per cent in those ill six months to two years and only nine per cent for patients ill more than two years.

In the severe psychoneuroses, hysterical reactions excepted, electroshock treatment is justified, especially in the reactive depressions. Nevertheless, psychotherapy is still our main form of treatment of this group. The earlier treatment is instigated in all types of amenable mental illnesses, the better are the results. As has been noted, electroshock therapy is not a cure-all. Further time will be necessary to fully evaluate its full place in psychiatry. Affective or emotional mental illnesses have recurred after treatment but there is no doubt that electric shock treatment has greatly shortened the period of illness of tens of thousands of mentally sick patients since this form of treatment (first introduced in Italy in 1937) has been used in the United States. It deserves wider recognition and recommendation by the general practitioner. Lay magazines and newspaper articles are forcing its importance upon the general public. The progressive physician will want to be adequately informed in order to answer justified curiosity and interest in this new form of therapy which can offer so much to so many.

Discussion

Psychiatrist E. D.: I think that this material is essentially satisfactory, although not as lucidly presented as might be possible.

The discussion is vague as to "hospital type" of shock and "ambulatory type."

I feel that there is too much indifference and apathy as to the potential dangers of electric shock. The author states the huge number of treatments without deaths, apparently discounting Ebaugh's report of two deaths at Colorado Psychopathic Hospital (Pueblo), early in their series of cases.

I agree that there is a place for electrofits outside of psychiatric hospitals but to draw the conclusion, as most persons must from this article and from Foster Kennedy's article in the *Woman's Home Companion*, that one can casually drop into their physician's office for a shock.

just as they would into the beauty shop, is false and misleading.

Some patients have a severe amnesia and confusion for days or weeks following electroshock, which may stimulate a severe organic reaction type, consequently these persons are going to be incapacitated for work or even looking after themselves and their property.

If these extraneous reactions are kept in mind, ambulatory shock may be of definite benefit. Maybe we will be able to treat many schizophrenics (dementia precox or split personality) much earlier and do much more good, than by waiting until there is complete personality disintegration before they receive treatment.

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218 State Street

The "Hypertonic" Infant

By IRVING J. WOLMAN, M.D., Brooklyn, New York

EVERY physician whose practice overlaps into pediatrics has seen infants displaying behavior which for want of a more precise term he has designated as "hypertonic." Such infants have muscle tonus which seems unusually rigid and tense. They like to lie on their sides or abdomen, with their back arched and their leg and arm joints kept partially flexed. Their foreheads often show corrugated wrinkles as they try to look upwards at what is going on beyond the head of the bed. There may be accompanying colic or the pylorospasm type of vomiting; they cry a lot, seem always hungry but regurgitate when fed, jump at noises, sleep too little, chew their fists, and are quieted somewhat by small repeated doses of atropine and respond even better to phenobarbital.

Such hypertonicity is an infantile behavior pattern, and is seen most commonly in the first few months of life, in thin babies and in prematures. Sometimes it accompanies congenital hypertrophic pyloric stenosis and other alimentary tract lesions, but is far from

characteristic or pathognomonic of these disorders.

It does not merit being called a symptom or syndrome. Rarely a congenital defect of the central nervous system may produce excessive muscular rigidity without simultaneous involuntary movements, but in such disease the posture is more distorted, intelligence is retarded, and the rigidity grows more pronounced as time goes by, instead of fading away after the first half year of life.

Once organic disease has been ruled out, no special treatment need be given, unless the child's growth and state of nutrition are being interfered with.

If pylorospasm or colic are leading symptoms, tincture of belladonna or 1/1000 atropine sulfate solution in doses of 1, 2 or 3 drops every 4 hours will give relief. When restlessness, hunger and irritability are dominant, one-half teaspoonful of elixir phenobarbital, U.S.P. (containing 1/4 gr. per dram) may be given at 4 hour intervals; regurgitation if present will be relieved also.

Worry

The commonest causes of worry are fear of illness and lack of money.

Rheumatic Fever II: Pathological Changes*

By K. T. NEUBUERGER, M.D.,† Denver, Colorado

FIBRINOID swelling of connective tissue is the earliest lesion of rheumatic fever; it may occur in all organs. Edema appears and waxlike refraction substances between the connective tissue, bundles in the synovia, endocardium and vascular walls.

White cells enter the area, connective tissue proliferation and later scarring takes place. The fibrinoid swelling takes place on the valves and causes verrucous (wart-like) endocarditis. It is not a specific lesion.

Aschoff nodules form from the fibrinoid swelling or independently. They are too small to be grossly visible. The lesions form palisades, stripes, or spindles around the small vessels (perivascular) in the myocardium. The nodules are made up of cells comprised of basophilic cytoplasm, resembling plasma cells. The cells have dark, plump, large nuclei. They are derived from undifferentiated mesenchymal cells of loose connective tissue. The nodules are gradually converted into scars.

Subcutaneous nodules or tendon nodes appear, not in the loose connective tissue but in dense tissue under the skin, about joints, ligaments, and tendons. They are larger than the Aschoff bodies, are visible and often palpable. They may be firm and fibrous or soft and gelatinous, with friable or calcified contents. They begin with fibrinoid swelling; later immigration of white cells occurs; proliferating fibroblastic cells form palisades around the hyaline, mucinous, necrotic or calcified centers.

Changes in Organs

Tonsils: Primary lesions have been reported in the tonsils.

Heart: A pancarditis, or involvement of all three heart structures (pericardium, myocardium, endocardium) is caused by rheumatic fever.

On the endocardium of the valves, verrucous lesions form small, translucent vegetations. The lesions themselves do not cause death as they tend to heal. They locate on the mitral and aortic valves, rarely on the tricuspid. Later, scarring occurs from organiza-

tion of the primary inflammation with thickening, stiffening, and adhesions of cusps and chordae tendineae. Subendocardial fibrinoid swelling is the basic lesion with apposition of fibrin and later ensuing chronic inflammation.

The myocardium shows Aschoff bodies and later scars.

Pericardial involvement may cause serious, sero-fibrinous or hemorrhagic exudate, which may be followed by vascular granulation tissue and finally adhesions.

Arteries: The aorta and pulmonary artery and also small arteries are involved. All coats are involved, especially the media. It shows fibrinoid swelling or frank necrosis, infiltration with white blood cells, Aschoff cells, and finally, scar formation. Aschoff cells distinguish the lesion from syphilitic aortitis which it may resemble grossly. When intima is involved, plaques may appear in the aorta which resemble those of arteriosclerosis and may play a part in its production.

Joints: The changes include mucoid or turbid exudate, with fibrin and polymorphonuclear cells, edema and congestion of the synovia; later, subcutaneous nodules will be formed.

Rheumatic Pneumonia

Lungs: Cough, bloody sputum, pain in chest, cyanosis and marked dyspnea have appeared in a number of cases studied here of rheumatic pneumonia.

In all cases, cardiac findings of a rheumatic lesion were obtained. The pathologic changes include: fibrinous exudate, focal necrosis with alveolitis, arteriolitis, mononuclear cells in the alveoli, septal cell proliferation in the alveoli and granulomas. Grossly, one can't make a diagnosis of rheumatic fever pneumonia. On the x-ray, one may see many small foci resembling military tuberculosis.

Research in Rheumatic Fever

1. **Brain pathology:** Obliterating endarteritis of meningeal and cortical vessels with microscopic infarctions of cortical tissue has been described, mainly in studies of brains of older insane patients dying from other causes. Significance of these findings is doubtful. Thorough examination of brain in rheumatic fever at all stages is highly

*Brief notes taken by R. L. Gorrell M.D., at the Rheumatic Fever Refresher Course, June 4-8, 1945, University of Colorado.

†Associate Professor of Pathology, Colorado University School of Medicine.

desirable. In chorea, there has been reported degeneration of the basal ganglia of the brain (corpus striatum). (Dr. T. Duckett Jones mentioned that many sections of brains from patients with chorea did not reveal a lesion.)

2. Relation to rheumatoid arthritis: Heart lesions similar to rheumatic fever occur in 65 percent of cases of rheumatoid arthritis. Nodular polyneuritis and polymyositis occur in rheumatoid arthritis. Biopsy reveals accumulations of lymphocytes, thus differentiates it from

rheumatic fever; nerves may be infiltrated with lymphocytes.

3. Sequelae to rheumatic fever: (a) Chronic passive congestion, (b) Emboli to various organs with ensuing infarction.

Discussion

Dr. T. Duckett Jones: Rheumatic fever pneumonia is essentially a condition showing varying, transient signs of consolidation in the lung and rheumatic fever signs in the heart.

(This is the second article of a series of seven, which will make up a complete graduate course on Rheumatic Fever. The first article appeared in Nov., 1945, and as far as possible these will appear monthly until completed.—Ed.)

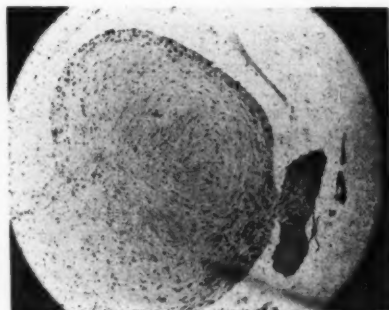


Fig. 1. Verrucous endocarditis of aortic valve.



Fig. 2. Rheumatic endocarditis — microscopic appearance of verruca with small deposit of fibrin.

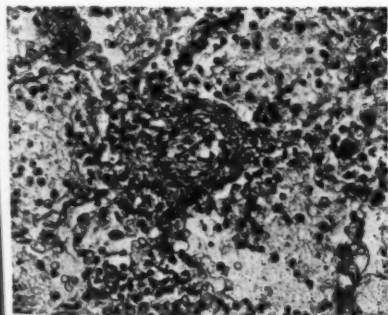


Fig. 3. Rheumatic arteriolitis with fibrinoid swelling of vessel wall.

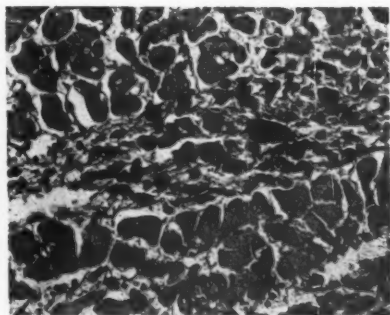


Fig. 4. "Aschoff body" — a rheumatic nodule in the heart.

Staphylectomy for Colds and Sinusitis

By WM. E. E. TYSON, M.D., Detroit, Michigan

I HAVE become increasingly interested in "Staphylectomy" since reading an article on this subject in the April 1943 issue of CLINICAL MEDICINE. To date I have performed fifty-one (51) staphylectomies with marked symptomatic response thus far observed, in cases of marked susceptibility to colds, protracted sinus infection, chronic nasopharyngitis and various remote symptoms of focal origin and seemingly ascribable to catarrhal involvement of the upper respiratory tract. That this procedure has remedial efficiency and a wide range of usefulness is clearly revealed by my abbreviated case-records:

Mrs. R. P., age 32. (Op. 7/10/43)—Frontal and maxillary sinusitis, nasopharyngitis for years, headache and frequent colds, unable to sleep much of the time, pains in left wrist:

All of these symptoms were promptly relieved by staphylectomy. Patient was afterwards comfortable in full recumbency and able to sleep soundly. For over a year-and-a-half she has been free of former difficulties and has had no colds.

D. M., age 32. (Op. 4/24/44) — Frontal sinusitis and nasopharyngitis for over six years, frequent colds, post-nasal drip, habitual clearing of throat, early morning paroxysms of coughing, bronchial involvement and profuse night-sweats:

In the course of only a few days all symptoms were markedly reduced and the patient returned to work. Throughout an entire year there has been no need for further treatment.

Caroline P., age 21 (Op. 8/24/44)—Sinusitis, headache, nasopharyngitis, postnasal drip, inability to sleep properly for three years because of blocked nares:

Pronounced relief within one week following staphylectomy and progressive improvement in all respects thereafter.

L. W., age 50. (Op. 11/1/44)—Frontal sinus infection, nasopharyngitis, frequent colds, chronic bronchitis, rheumatic pains in various joints, insomnia, postnasal drip for over nine years, (during which he spent more than \$8,000 without gaining relief), inability to freely expand chest, due to bronchial irrit-

ability, was one of his most distressing symptoms:

Three days following staphylectomy patient was able to sleep "all night." Subsequently chest expansion definitely improved. Within the first ten days the patient manifested intense enthusiasm over the symptomatic results achieved.

Stanley M., age 32. (Op. 14/18/44)—Frontal sinusitis, nasopharyngitis, chronic headache, hoarseness and postnasal drip for three years; also an early defect in hearing:

All symptoms underwent demonstrable abatement only six days after staphylectomy, and hearing subsequently improved.

F. W., age 28. (Op. 2/7/45)—Pansinusitis, nasal obstruction, nasopharyngitis, frequent colds accompanied by headache for a period of five years:

Every symptom referable to nose, throat and sinuses was definitely relieved within ten days following staphylectomy.

N. J. P., age 37. (Op. 3/19/45)—For twenty-five years had had frontal and maxillary sinusitis, nasopharyngitis and postnasal drip, soreness and pain in shoulders, arms and hands for over a year, sleep disturbed by throat irritability and occlusion of left nostril, exhausting paroxysms of hawking in the early morning:

Decided improvement six days following staphylectomy. So great was ultimate relief that this man now says he feels "100 percent."

J. A., age 21. (Op. 3/24/45)—Pansinusitis and nasopharyngitis for eleven years, chronic sore throat, incessant sneezing, colds almost steadily, earache, tinnitus aurium, unable to breathe through left nostril due to vascular engorgement; swelling of hands and puffiness of eyelids for past two years, the cause of which was not ascertainable:

Decided relief of all symptoms six days following staphylectomy and progressive improvement since. General health unmistakably benefitted, but some edema of hands and eyelids still persists.

D. F. W., age 40. (Op. 9/11/44)—For two months he had complained of pain radiating from left sacro-iliac region to

thigh, posteriorly, and to calf of leg and foot; frontal sinus infection, nasopharyngitis with persistent headache and insomnia for over a year; half-hour sessions of sneezing every morning that so greatly aggravated his sciatic pain that he felt "torn to pieces" while they were in progress:

This patient experienced a large measure of relief only twenty-four hours after his uvula was removed, stating that "sharp pains in left thigh were becoming bearable." Restful sleep was promptly restored and within a week his symptoms, generally, were definitely in abeyance and have remained so.

Mrs. M. R., age 67. (Op. 3/21/45)
Nasopharyngitis and pansinusitis for forty years; for six months, has had left hemicrania and soreness of cervical muscles; rheumatic pains in hands and feet and insomnia, blood-pressure 170/155:

Ten days following staphylectomy an antecatharrhal response was plainly in evidence and rheumatic pains were more than fifty per cent relieved. Patient said she was sleeping normally, her head "felt clear" and blood-pressure had dropped to 140/80.

J. C., age 40 (Op. 3/30/45)—Rheumatic pains in various joints for twenty-three years, varying with weather-changes, unable to work for four months; "heat and soreness" in neck and over occiput for 2 years which on one occasion led a physician to suspect meningial involvement; right frontal and maxillary sin of two weeks' duration; pain in the right temporal region, probably referable to sinus involvement:

Almost immediately after staphylectomy "pain above right ear was reduced" and this was promptly followed by disappearance of frontal and maxillary discomfort. In ten days practically none of his original symptoms persisted and he was ready and eager to return to work.

M. W., age 57. (Op. 4/9/45)—Sinusitis, nasopharyngitis and an annoying rhinorrheal drip for 25 years; lung abscess four years ago; blood-pressure 130 (had been high for past eight years ranging from 180/100 to 240/140); chronic cough, insomnia, troublesome nocturia (up 3 or 4 times every night), acid fermentation and flatulence requiring alkaline mixtures for five years. Surprisingly little dysphagia followed staphylectomy. The succeeding day patient said coughing had virtually ceased, and he slept well (up only twice) and

ate a good breakfast. Within a few days he looked as though he had had a six months' vacation and said he "felt better than in years." His catarrhal response was rapid and so greatly did his general health improve that he even claimed there had been a restoration of sexual potency. No lowering of blood-pressure has been noted.

G. M., age 14. (Op. 8/15/43)—Nasopharyngitis, hypertrophied tonsils and obstructive adenoids:

Tonsillectomy and staphylectomy performed, but the adenoid tissue was not disturbed. Six weeks later, catarrhal difficulties had subsided. The patient could breathe freely through both nostrils and inspection of the pharyngeal vault revealed marked shrinkage of lymphoid hypertrophy previously observed. (To some degree the faucial tonsils will undergo similar atrophy following complete removal of the uvula.)

Staphylectomy has in its favor not only the unparalleled effectiveness depicted in these brief case-reports, but the distinct advantage of being a simple office procedure that can be practiced by the general clinician. The immediate after-effects impose practically no disability and the ensuing dysphagia lasts only three or four days, never persisting to any degree more than eight or ten. Temporary avoidance of hot food and beverages is the only dietary precaution that has to be exercised. So far I have observed no detrimental or undesirable effects from staphylectomy.

My analysis of the dramatic results and wide applicability of this novel procedure has yielded no explanation of its remedial effects more satisfactory than the rationale advanced by Dr. Arthur E. Ewens in his original writings on this subject.

I have departed somewhat from Doctor Ewens' operative technique. Instead of relying upon the topical application of an aqueous solution of cocaine, which in my hands has not always induced satisfactory anesthesia, I insufflate the uvula and adjacent surfaces with powdered benzocaine until the gag-reflex is entirely abolished. For preliminary antiseptics the throat is thoroughly sprayed with Ceapocol (mucous membrane antiseptic). Though pronounced hemorrhage is rarely encountered, the subcutaneous administration of 1 c.c. of surgical pituitrin is a reliable safeguard against such a contingency. In my hands this has proved equally as effective as Vitamin K three times daily for a day

or two in advance of the operation. It also obviates needless delay during which a timid patient has the opportunity to change his mind. To Dr. Ewens' use of Noyes' alligator-jaw forceps and curved tonsil-scissors I have added the application of a toothed clamp with lock, amputation above this clamp ensuring complete removal of the uvula. This method leaves not the slightest redundancy in the faucial arch and does away with possible unevenness that sometimes necessitates further use of the scissors. Elimination of this secondary step in the operation is distinctly advantageous. The whole procedure consumes less than a quarter of an hour, including a five minute period during which slight oozing usually undergoes complete subsidence. Since employing the technique described none of my patients has had any bleeding after leaving the office. (Thrombin

solution applied locally will check bleeding—Ed).

From my own experiences during the past two years I am convinced that staphylectomy is destined to be recognized as the greatest single contribution yet made to the treatment and effective control of catarrhal diseases of the upper respiratory tract, including susceptibility to the common cold which is unquestionably reduced. Like all radical innovations, staphylectomy has initially provoked derisive denunciation based largely on the proverbial, but unfounded, belief that the uvula is an essential and functioning structure. Only by practical and unbiased investigation can the stumbling-block be removed and a valuable antiscatarrhal measure made available to the millions of human beings urgently in need of it.

2949 Gratiot Ave.

Parathyroid Tetany

By C. D. MARPLE, CAPT. (M.C.) Santa Ana, California

I. Causes:

1. Idiopathic.
2. Accidental ablation of the parathyroid glands during thyroidectomy.

II. Signs and Symptoms:

1. Laryngeal stridor.
2. Carpopedal spasm.
3. Positive Chvostek's sign (tapping lightly the branches of the facial nerve produces twitching of the muscles supplied by that nerve).
4. Positive Trousseau's sign (compression of the muscles of the upper arm produces tetanic spasm of the hand muscles).
5. Positive Erb's sign (heightened irritability of the motor nerves to a galvanic current).
6. Low blood calcium: High blood phosphorus.
7. Cataract formation (late effect).

III. Treatment:

Acute phase—

1. Calcium salts intravenously, 0.5 per cent solution calcium chloride or 10 per cent calcium gluconate in doses of 1 gm. or more.
2. High Calcium — low phosphorus diet (high in leafy vegetables and low in meats, milk, and egg yolks).
2. Parathyroid hormone or A. T. 10. (dihydrotachysterol).

Chronic phase—

1. Calcium salts orally, 1 to 2 gm. daily before meals (chloride, lactate and gluconate are decreasingly efficient in the order named).
2. High calcium, low phosphorus diet.
3. Parathyroid hormone in doses of 50 to 100 units (Squibb, Lilly, Parke-Davis).
4. A. T. 10 (dihydrotachysterol, synthetic irradiated sterol) in 5 to 20 drops daily.

IV. Mechanism:

1. Lack of parathyroid hormone increases the excretion of inorganic phosphorus.
2. Elevations of the inorganic phosphorus in the blood leads to a decreased blood inorganic calcium level.
3. High blood phosphorus causes decomposition of phosphorus bones and inorganic calcium is deposited in bones along with phosphorus.

V. Differential diagnosis:

1. Tetany from other causes, alkalosis,
2. Hysteria,
3. Tetanus,
4. Myotonia congenita.

A New Improved Inhaler

By JOSEPH B. BIEDERMAN, M.D., Cincinnati, Ohio

THERE is a definite place in the physicians therapeutic armamentarium for volatile medicaments, in the treatment of those ailments that are not severe enough to cause the patient to remain in bed, but do cause him a great deal of discomfort.

In Hay Fever, (Rose Fever), rhinitis, pharyngitis, laryngitis and in acute bronchitis, volatile medicinals have proven themselves of great value. A great disadvantage, however, in the employment of the various volatile medicaments is the frequent necessity for using a steam vehicle and concomitant cumbersome containers.

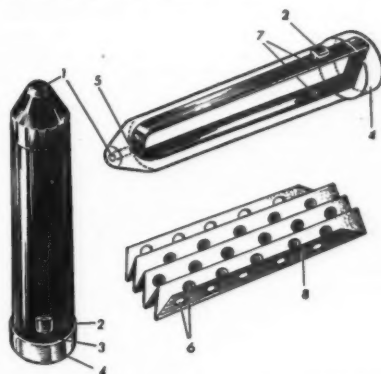
Due to their convenience of use, small nasal inhalers have become very popular. These inhalers are conveniently carried in a pocket or purse, and are so easily used that the physicians prescribing these inhalers are apt to have their orders followed and the patient receives the benefits of medication.

Construction of Inhaler

The drawing illustrates some improvements. The left portion of the drawing shows the complete inhaler. There are caps to remove or lose because the inhaler is all in one piece. When the knob (2) is pressed toward the metal band (4), the plug (5) is pulled away from the opening (1) that fits into the nostril. At the same time the knob passes down the slot (3), the portion marked (8) is aligned with the slot (3), permitting flow of air through the slot. The larger the knob is pulled to the band, the larger the opening becomes, thus allowing for proportionately increased flow of air through the inhaler.

The medicated pad (8) placed inside the inhaler can thus be regulated so as to give off medicinal vapors of the strength desired. The same medication can be used to treat varying degrees of mucosal swelling and be regulated to suit the need at the time of use.

Another advantage of this inhaler is in the construction of the pad, (8) which is impregnated with the volatile agent. Instead of using a cotton wick, which allows the air to flow around it, cannot utilize the medication drawn to the center of the wick, the new construction permits the utilization of the maximum quantity of medicament because the medicine is spread over a



much larger area and the alternately placed perforations (6) permit the air drawn through the inhaler to contact and thus carry the maximum amount of medication to the involved mucous membranes of the nasal passages, pharynx, larynx and bronchial tubes.

The physician can prescribe whatever volatile inhalants he desires. The writer has found the following combination very effective: Menthol, Camphor, Oil of Pine Needles, Eucalyptol and Oil of Peppermint.

Of one hundred patients who have used this inhaler for the relief of nasal, pharyngeal, laryngeal, and bronchial symptoms associated with the common cold, 96 per cent stated they obtained relief. No untoward reactions were noted.

Of one hundred patients with Hay Fever (Rose Fever), who used this inhaler, 92 per cent stated that they obtained relief of nasal congestion following its use. No untoward reactions were noted.

Comment: A new improved nasal inhaler is described which can regulate flow of medicinal vapor to strength desired. A new type of wick is also described which enables the maximum utilization of the medication.

Summary: In view of the effectiveness, safety and convenience of use of nasal inhalers, it is suggested that this means of treatment be considered when prescribing volatile medicaments for relief of symptoms of Rhinitis, Pharyngitis, Laryngitis and simple Bronchitis, as well as for the relief of nasal congestion associated with sinusitis.

Union Central Building

Rickettsial Diseases In Man*

By COL. HARRY PLOTZ, M.C.,† Washington, D. C.

Epidemic typhus and Brill's Disease: Brill's disease has been reported in New York City, Boston and Chicago. These patients run a mild fever and clinical course, always recover, always give a history of life in a country where epidemic typhus flourishes, such as Roumania; frequently give a history of having had epidemic typhus. Brill's disease never occurs in any one else in the family. It is exceedingly difficult to identify the agent.

The clinical course duplicates the experience in the Army with men who have been vaccinated against epidemic typhus and later have it in mild form.

Conclusion: Brill's disease is a late, recurrence of epidemic typhus fever. Man may be the reservoir for epidemic typhus, thus completing the cycle of typhus.

Epidemic Typhus Fever Vaccine

There have been no deaths from epidemic typhus in the U. S. Army despite exposure in the worst epidemic areas in the world; a few mild cases occurred. The epidemic typhus vaccine, containing rickettsia and soluble antigens, is thus proven effective.

D.D.T., the powder insecticide, will control the louse, which transmits epidemic typhus fever.

Murine typhus fever, as contrasted to epidemic typhus, is characterized by a mild clinical course and low mortality rate (5 percent). The flea is the vector in this disease and the reservoir is the louse.

Many of these diseases may be specifically diagnosed. In the following groups, the diseases in each group confer immunity on the other members of their own group but not for any other group.

- A. Epidemic typhus fever
- Murine typhus fever
- B. Spotted Fevers, including Rocky Mountain Spotted Fever, South American Spotted Fever, Tick-bite Fever of Columbia
- C. Tsutsugamushi fever } Same disease
- Scrub typhus }
- D. Q Fever: American Q Fever, Australian Q Fever

*Brief abstract by R. L. Gorrell, M.D., of a paper delivered before the War-Time Graduate Meeting, Fitzsimons General Hospital, Denver, Colorado, March 15, 1945.

†Director, Division of Virus and Rickettsial Diseases, Army Medical School, Washington, D. C.

(Trench Fever may be placed in a fifth group, but is not definitely proven)

Epidemic typhus fever is a louse born infection; man may be the reservoir. Rats and mice are the reservoir of murine typhus.

All spotted fevers are tick born infections; the ticks are the reservoirs and dogs also.

Tsutsugamushi is carried by the field mice and rats.

Q fever is born by ticks. It is so highly infectious that inhaling the feces of ticks i.e. while working in an abattoir, will result in the disease.

Diagnosis

The diagnosis is made by

1. Clinical grounds
2. Isolating the organisms
3. Serologic tests

Injections into laboratory animals may yield a diagnostic finding. For example murine typhus results in scrotal swelling in the guinea pig and Q fever results in a huge spleen in rats.

Don't Be Misled by Serologic Tests

A diagnosis cannot be made on a serologic test, as it has been shown that agglutination may take place even though the infection occurred years previously. If repeated tests show a rising titer (agglutination with weaker and weaker strengths of the patients blood serum), then one may consider that an actual infection is present.

The Weil-Felix Reaction

If the Weil-Felix test shows a rising titer, a rickettsial disease should be suspected. This test disappears the months after the fever is gone, so that it is of no value as a test for previous diseases. If antibodies appear during the course of a disease, a definite diagnosis can be made.

Agglutinins

By testing the agglutinins, one may have a specific test. They slowly appear after a number of months and thus are also worthless as a mark of previous disease. Agglutinins develop 8 to 10 days.

Complement Fixation

The organism may be used as antigen. Antibodies persist for years, so their presence is diagnostic of previous or present infections. If cross immunity is ever present, it is of low titer.

Complement fixation tests furnish a specific diagnosis of epidemic typhus fever, of Rocky Mountain Spotted Fever, of Brill's disease.

Further evidence that there is no cross immunity is shown by the fact that endemic typhus fever occurred in soldiers protected against murine typhus.

Discussion

1. When a tick becomes infected, it retains the agent for life. Don't forget that the tick is a scavenger, carrying many things including non-pathogenic rickettsia so that laboratory examination of the tick is very difficult to evaluate.

2. The flea carries the agent for murine typhus for life. The louse, on the other hand, dies of epidemic typhus at the end of 8 to 10 days.

3. A high titer (or positive) Weil-Felix reaction may occur in other conditions, such as tularemia, rat bite fever, Proteus infections, and rarely in health. The OX19 reaction is unimportant as spontaneous clumping occurs.

Conclusion

A rising titer of antibodies is significant; one serologic test is never diagnostic.

Tropical Medicine

By CAPT. ALPHONSE McMAHON, M.C., Bethesda, Maryland

PREVENTION of Tropical Diseases:

The institution of an adequate and a well-supervised sanitary program is the most important single factor in the prevention of tropical diseases. The program must be extensive enough to control all factors that may participate in the causation of diseases in man.

The food supply must be carefully supervised as to quality and preparation. The condition of the food containers should be determined at frequent intervals and food handlers should be examined frequently for the presence of disease carriers.

If disease incidence is to be kept at a low rate, the control of flies and mosquitoes is essential. They are responsible for more tropical diseases than any of the other factors concerned with the spread of disease. Adequate screening of mess halls, galleys, sculleries and latrines is important if fly-borne diseases are to be controlled. Dishes must be protected from contamination by sterilization and by well screened storage spaces. Mosquito larvae must be destroyed and contact between the mosquito and man prevented, (screening, use of newer repellents and insecticides).

Malaria: Malaria is transmitted by the anopheline mosquito. The benign tertian type, caused by the Plasmodium vivax, shows a tendency to recur at regular intervals over a long period of time. This type responds to specific therapy promptly, but this quick response has no indication as to the free interval.

Recurrences may appear for no apparent reason. Often, the recurrences are fewer and become less severe, as time goes on.

Atypical Manifestations: Between acute attacks, there may be unexplained fever and debility. Also, malaria may co-exist with other diseases.

Malignant Tertian Malaria: Malignant tertian malaria (estivo-autumnal) caused by the Plasmodium falciparum, may be severe and pernicious, with many types of clinical manifestations and may, simulate acute diseases of the various systems of the body.

Cerebral malignant malaria may resemble:	Meningitis Sunstroke Hysteria Epilepsy
Cerebral malaria symptoms:	Headache Increased cerebral activity, even to mania. Rapid onset of coma.

Treatment must be begun *early* if it is to be effective. The above symptoms appearing in a patient recently returned from an endemic malarial area is sufficient indication for institution of treatment, whether a history of malaria is obtained or not. If laboratory facilities permit, blood smear's should be examined for the parasites.

Gastro-intestinal malaria may resemble:	Acute appendicitis. Intestinal obstruction. Dysentery
Pulmonary malaria may resemble:	Pneumonia Bronchitis

Bacillary Dysentery: *Shigella* organism dysentery causes much morbidity and, often, a high mortality rate. The organisms are transmitted by food or drink, contaminated by infected feces. Flies play a vital part in carrying infected material to food, dishes, and utensils; this may be prevented by screening toilets and food areas, and by examining food handlers for carriers.

Symptoms: 1. Mild gastrointestinal disturbances, with intermittent diarrhea and constipation, or 2. marked abdominal cramping pains, tenesmus, diarrhea with mucopurulent and bloody stools, fever, extreme prostration, toxemia, and dehydration.

Treatment: Sulfadiazine is the drug of choice. Its use is followed by a rapid subsidence of symptoms within 24-48 hours. The length of the illness is decreased, and convalescence is much shortened. The prevention of chronic infections and carrier states has also been materially helped.

Amebic Dysentery: The entameba histolytica is introduced into the body thru contaminated food or drink (cysts in the drinking water; food contaminated by carriers or flies). It may be destroyed by chemical sterilization of foods and water. Avoidance of uncooked foods is important, as is the search for carriers among the food-handling group.

Symptoms: The acute symptoms may be as severe as in bacillary dysentery, and the clinical state may become rapidly serious, but the disease tends to be chronic and intermittent. Vague gastrointestinal symptoms, digestive disturbances, abdominal discomfort, alternating diarrhea and constipation, lassitude and debility are common, especially after long-standing infections.

Hookworm Disease: The presence of the disease was often indicated by finding the ova in routine stool examinations.

Symptoms: Vague gastrointestinal complaints, resembling the irritable colon syndrome.

Often the only clue to the presence of hookworm infestation was an eosinophilia of 10 per cent or more.

Filariasis: Filariasis proved to be a disabling disease to troops stationed in the South Pacific, especially in the Samoan Islands group. It is caused by a nematode, one of the forms of *Wuchereria bancrofti*. Mosquitoes may be the intermediate host; they introduce the parasite by biting man. Microfilariae appear in the lymphatic vessels, after

mating takes place, within a year or more after the infection.

Symptoms: Appear at varying intervals from 1 month to 21 months after exposure, with the majority presenting symptoms in from 6 to 16 months. *Lymphangitis and lymphadenitis* involving arm, leg or both, are among the earliest symptoms, and there may be slight fever and malaise accompanying. The localization of the parasites in the pelvic and inguinal lymph nodes results in involvement of the genitalia and adjacent structures.

The acute attack may have a variable duration of from a few days to three weeks. Recurrences in new sites are common, and may appear at irregular intervals, often after muscular exertion.

A sudden acute reaction may follow severe muscular exertion with focal signs simulating an acute abdominal syndrome, meningitis, renal calculus and pneumonia. During the acute reaction an extremity and its lymph nodes may swell.

Chronicity: The patient often complains of muscle aching, weakness, a dragging pain in the testicles, and pain or numbness in the extremities, which are aggravated by walking or standing.

Mental depression is a common feature, often due to fear of impotence or sterility, or fear of developing complications such as are seen in the natives. **Prognosis:** The duration and ultimate outcome cannot be definitely stated now. A gradual subsidence and late disappearance of symptoms has permitted a number of men to return to military duties.

Scrub Typhus: *Tsutsugamushi* disease is widely spread in the western area of the Pacific (Solomons, New Guinea, China, Philippines, Japan and Formosa).

Etiology: A rickettsia, transmitted by the larval forms of the trombiculid mite. The field mouse is the probable animal reservoir. The mite comes in direct contact, with man usually among the grasses of the area, which are mite-infested.

Onset: Abrupt with chills, fever, headache and drowsiness. Extreme prostration and mental confusion accompany the rising fever and toxemia. The fever reaches its maximum in one week, remains high during the second week then gradually disappears by lysis.

Rash: Macular or maculo-papular rash appears on the face or trunk between the fourth and eighth days.

Pneumonitis is frequent, with severe

respiratory distress accompanying the progressing pulmonary involvement.

Signs: A crust appears at the site of the bite; lymph nodes in the area are enlarged. As the disease progresses, generalized lymphadenopathy becomes evident.

Mortality rate has not been high but the convalescence is prolonged.

Diagnosis: In an epidemic area, the disease may present no problems in diagnosis. A positive Weil-Felix reaction appears after the tenth day of the disease. There is no specific treatment.

Dengue: An acute, febrile disease which results in high morbidity but low mortality rate.

Etiology: A virus, transmitted by the mosquitoes *Aedes aegypti* and *Aedes albopictus*.

Symptoms: Sudden onset with severe generalized aching, fever, headache and weakness. The extreme prostration is typical. The characteristic fever curve has been called a "saddleback" curve. The rash varies in epidemics and individuals. The convalescence is prolonged, with persistent fatigue.

Functional Uterine Bleeding: A Case History

By GEORGE VAN S. SMITH, M.D., Brookline, Mass.

MISS J. S., single, a defense worker of 18 years, referred by another physician, on July 7, 1943.

Chief complaint: For two years her menstruations have been irregular, delayed and prolonged. At times she is menstruating almost constantly, especially during the past eight months. There is never any pain at any time, but nausea occurs at the time of onset.

Previous Treatment: She has been treated with Antuitrin-S, testosterone, and Synapoidin—with varying success—by Dr. Z.

Past history reveals no serious illness. Her menstrual history: Onset—age 11½, every 30 days, 5 days, no pain, three to four pads per day. The respiratory system, circulatory system, digestive system, nervous system are all negative. Her weight is 140 pounds, which represents a slight gain. Her diet is satisfactory. She has been taking iron and liver intermittently for the last two years. She is active, sleeps well, and has always been in good health. Examination is negative except for a slight irregularity in the heart and a double first sound. The uterus is intact. A small speculum was inserted revealing a normal vagina and cervix which was a little everted and moist. An endometrial biopsy was taken. The uterus was normal in size; it was in second degree retroversion. Rectal examination was negative.

Diagnosis: Functional uterine bleeding can be heart disease.

Treatment: (1) Consultation with cardiologist. (2) Armour's thyroid 1 grain daily. (3) Continue with iron and liver

capsules. (4) Report at once after period, which will start about July 13th.

Endometrial Biopsy: Path. Report # S-43-1389: Proliferating endometrium with cystic hyperplasia.

Injections: 10 mg. progesterone plus 1 mg. estradiol benzoate at once; 4 ampoules of progesterone given to patient for the other injections as prescribed.

July 12, 1943: Note from Dr. B. H.—Patient has no disability; has never had rheumatic fever or chorea. Heart shows no enlargement, no murmurs, rhythm regular. Blood pressure 90/72. Normal electrocardiogram with marked respiratory arrhythmia. This is entirely normal in young people. In my opinion, her cardiovascular apparatus is normal in every way.

July 17, 1943: Letter from mother: Everything is working out as you said and we all hope that it will continue.

Injections, as above—on July 7, 8, 9, 10, 11/43.

September 25, 1943: Menstruation occurred on July 14 accompanied by crampy pains. She feels well; her weight is 150 pounds. The injections were repeated in August and menstruation occurred on August 10. (27 days without any pain.) Injections were repeated and menstruation followed. September 5—26 days—with crampy pains. This was a scanty flow.

Injections were repeated September 27 to October 1 and menstruation occurred October 3 (28 days) lasting until October 6.

Injections as above were given from October 24 to October 28. Menstruation

occurred on October 28, November 23, December 20 and January 15 accompanied by crampy pains. Menstruation has not been heavy. She will continue to take thyroid extract and liver and iron capsules.

According to the history and the endometrial biopsy, this patient was not ovulating; she was having anovulatory bleeding of functional, that is, unknown, origin. Her ovaries were producing estrogenic substance which gave endometrial hyperplasia but were not secreting progesterone so as to yield a secretory endometrium. I satisfied myself that she had no organic disease and recommended general health measures. The cyclic treatment was prescribed with the purpose of stimulating pituitary-ovarian activity by means of induced post-ovulatory-like bleeding, that is, true menstruation was artificially induced.* The failure of the fifth series of injections to be followed by flowing and the fact that she

had started flowing on the second day of the fifth series of injections indicate that her ovaries had "taken over." It is significant that cramps occurred both with the induced periods and the spontaneous ones that followed treatment. For reasons still unknown, it is now generally accepted that *dysmenorrhea in young women is a symptom indicating the likelihood of ovulatory cycles.*

Discussion: by Elmer L. Sevringhaus, M.D., University of Wisconsin School of Medicine—I think the diagnosis offered, the rationalization included and the explanations involved are correct to the best of our knowledge. I am not quite as convinced as Dr. Smith indicates that dysmenorrhea in young women is a symptom indicating the likelihood of ovulatory cycles. This is, however, a very temperate way to make a statement as compared with what I have heard from other physicians in Dr. Smith's community, namely, that one never has such pain without ovulation. I am certain that cramping pain may be reported by some young women where we have had evidence that ovulation did not occur at that cycle.

*Smith, G. V., Smith, O. W., and Schiller, S.: *Amer. J. Obst. & Gynec.*, vol. 44, no. 3: 455-459, Sept., 1942; no. 4: 606-615, Oct., 1942; vol. 45, no. 1: 15-28, Jan., 1943.

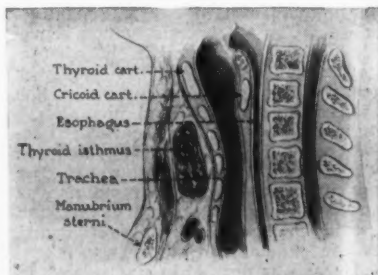
Physical Examination of the Thyroid Gland

Frequently a goiter is overlooked, or a pad of fat, a prominent cricoid cartilage, or some other structure in the neck is mistaken for a goiter. In 99 per cent of individuals, the thyroid gland is in the same position, the superior border of the isthmus being just beneath the cricoid cartilage and the entire gland wraps itself snugly around the trachea.

The patient is asked to take a sip of water and to tilt his head backward as much as is possible without appreciably tightening the muscles in the thyroid region. Having identified the structures and with the hands placed in the expected location of the thyroid gland, the patient is asked to swallow.

With repeated acts of swallowing, the contour and consistency of the gland is estimated. Next, determine if a bruit is present by placing the stethoscope over the gland, since this is of aid in differentiating a toxic from a nontoxic goiter. In a toxic gland, a bruit can usually be heard over the entire gland. It should be differentiated from bruits produced by compression of the carotid vessels and from cardiac or respiratory sounds.—ROBERT H. WILLIAMS, M.D. (Harvard Medical School) in *Med. Clin. N. Am.*, Sept. 1944.

The thyroid gland moves on swallowing—this is an important clinical feature of goiters, distinguishing them from other cervical tumors. A strong process of cervical fascia binds the gland to each side of the cricoid cartilage, thus causing its movement on swallowing.—Ed.)



A sketch drawn to scale, to illustrate how decidedly the trachea recedes from a relatively subcutaneous position at the cricoid, to a depth of about $1\frac{1}{2}$ inches on a level with the manubrium. Consequently, the superior poles, and upper margin of the isthmus of a normal thyroid gland lie nearer the surface than the inferior poles.

Editorial

Christmas Inside and Out

This is the time of year for all of us to limber up the joints of our inner selves and get our thinking working outside our own little spheres—to look up some folks who need some of the good things we are able to give or do for them, with no thought of receiving anything in return. This is necessary to get at the essence of the Christmas spirit, that we may enter into the festivities with the greatest amount of inner joy for the basis of the outer gayeties; so shall we all have a truly MERRY CHRISTMAS.

In darkness there is no choice. It is light that enables us to see the differences between things; and it is the Christ that gives us light.—Hare.

Thiouracil is Not Available

A number of physicians, who have read articles concerning the efficacy of thiouracil in the medical treatment of hyperthyroidism, have written to ask when and where the new product would be available.

Robert H. Williams, M.D., Thorndike Memorial Laboratory, Boston City Hospital, who has carried on much of the clinical work, was written to. He answered:

"In answer to your questions, I have no idea as to when thiouracil will be released commercially. Application for this was turned in approximately one year ago. However it was held up by the F. D. A. (Food and Drug Administration—Ed.) until more data was obtained concerning the frequency of agranulocytosis.

"I think that the general surgeon and physician should be told that this is a drug that is highly effective in the control of thyrotoxicosis, but due to the as yet undetermined significance of the toxic reaction, it is best that it not be used universally unless it is used in preparation of patients for surgery. It so happens that most of the toxic reactions occur in the first six weeks. Conse-

quently, one is faced with this problem even in the preoperative use of the drug.

Head Injury: Diagnostic Errors

The problem of the unconscious patient following head injury has yet to be solved. From the former method of decompressing a large percentage of such patients, the pendulum of surgical opinion has swung to such conservatism that even patients with extradural hemorrhage are being overlooked.

It is well known that patients after head trauma often do not present typical or localizing symptoms (perhaps we need a Kanavel to so thoroughly study the signs and symptoms of each intracranial traumatic lesion that a definite diagnosis can be made within a few hours). For example:

A man of 56 fell down stairs, striking his head. Unconsciousness gradually supervened. Neurologic signs (right sided paralysis) indicated pressure on the left cortical motor centers. A left temporal decompression failed to reveal a lesion. Death occurred 48 hours later and an autopsy disclosed a right sided hemorrhage, which could have been easily prevented by ligating the middle meningeal artery on that side.

A truck driver was injured in an accident. He became stuporous, and the possibility of subdural hematoma was considered by the attending neurologist. No localizing signs were present at any time. Death occurred after 3 days; autopsy disclosed a frontal lobe hematoma.

A few neurosurgeons propose "woodpecker" surgery, the making of several trephine openings in the skull. This procedure discloses hemorrhage or hematoma that are not diagnosable in any other way.

Despite all the barrage of poorly supported claims for the efficacy of spinal fluid drainage or "dehydration therapy" with intravenous sucrose or glucose solutions, one wonders if the severe head injury patient is helped by any such medical measures. Oxygen benefits many stuporous and unconscious patients.

Gynecologic Clinic: Questionnaire

THIS "Pictorial Section" illustrates various gynecologic conditions. Can you name them? The photographs, sketches and discussions were submitted

by Karl J. Karnaky, M.D., Baylor University School of Medicine, Houston, Texas.



Fig. 1. Pus is being expressed by pressure. What is the source?



Fig. 2. An ulcer is present on the left labia. What is the cause?



Fig. 3. What caused this process?



Fig. 4. What is the cause of the pus coming from the urethra?

Gynecologic Clinic: Questionnaire



Fig. 5. A small sore of the right labia majora. What is the cause?



Fig. 6. What is the lesion?

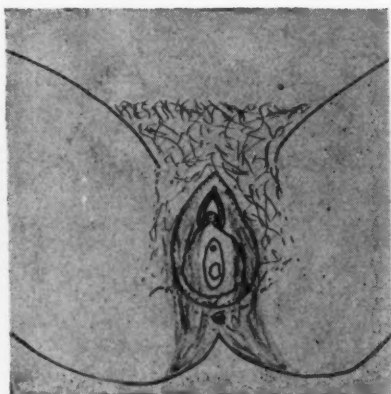


Fig. 7. External discoloration suggestive of—?

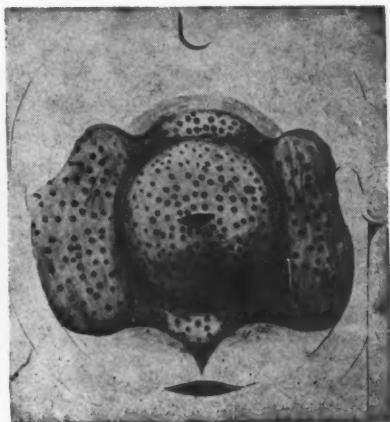


Fig. 8. "Salt and pepper" vagina due to—?

Gynecologic Clinic: Questionnaire



Fig. 9. What is the lesion?



Fig. 10. Papules on vulva. What is the cause?

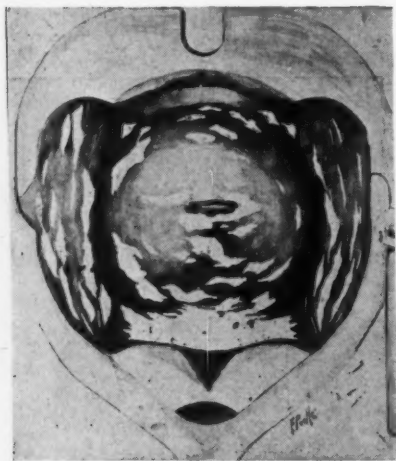


Fig. 11. The vagina and cervix of a pregnant patient, whose complaint was of a vaginal discharge. What is the cause?



Fig. 12. Superficial lesions on labia. What is the cause?

Gynecologic Clinic: Discussion

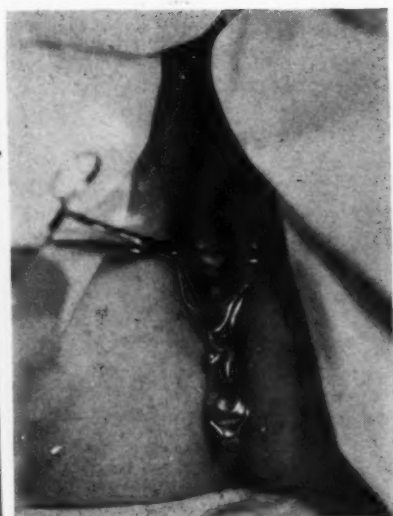


Fig. 13. Before applying medications or studying the vagina and cervix, cleansing should be done with cotton. Smears for trichomonas vaginalis must be taken before any other procedure is carried out.



Fig. 14. An inexpensive device for circulating heat in the treatment of acute pelvic inflammatory conditions. The apparatus has two barrels, one above for the warm water to run in and a lower one for the water to run out. The upper barrel is connected to an ordinary douche can; the lower to the outlet in bath tub or elsewhere. A pinch cock on the lower rubber tube can be closed; this causes the vagina to distend and spreads the hot water to all portions of the vagina, thus heating all the adjacent tissues.

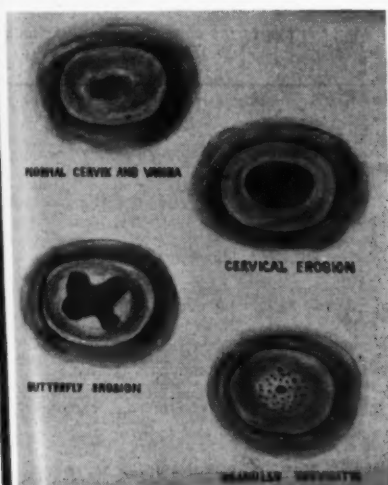


Fig. 15. Vulvo-vaginitis of children; various forms of lesions.

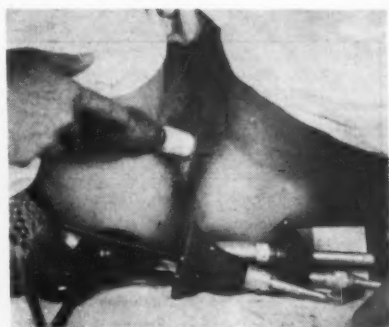


Fig. 16. An inexpensive powder blower for the dry treatment of leukorrhea can be made from a male aseptic syringe. The end should be slightly enlarged by grinding on an emery wheel or filing it wider. Medicated powder or dry cornstarch may be sieved through 2 layers of gauze into the barrel. The syringe is inserted as is comfortable, then the contents blown (insufflated) into the vagina by squeezing the bulb.

Gynecologic Clinic: Discussion

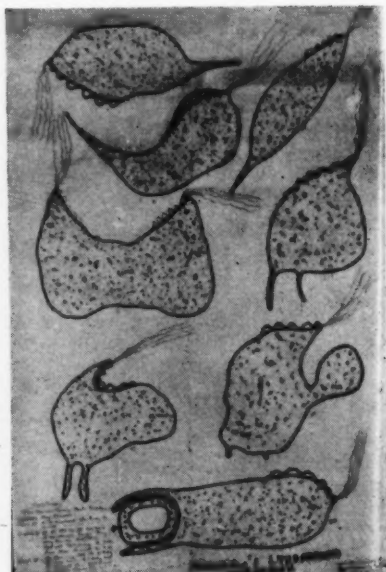
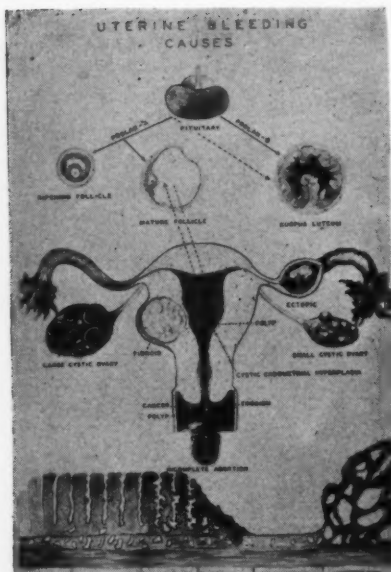
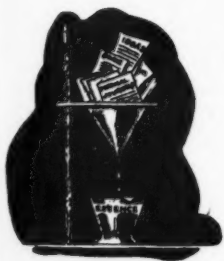


Fig. 17. The common causes of uterine bleeding are illustrated (in complete abortion, polyp, erosion of the cervix or body of uterus, ectopic pregnancy, fibroid, pituitary-ovarian dysfunction). The uterine myomas or "fibroids" are not a very common cause of bleeding. Bleeding does not occur until the endometrium is involved, directly or indirectly.

Fig. 18. A fresh smear of vaginal secretion showing various forms of trichomonas vaginalis.

Answers to Questionnaire

- Fig. 1. Infected Bartholin glands.
- Fig. 2. Chancre of the labia.
- Fig. 3. Granuloma inguinale of perineum.
- Fig. 4. Infected Skene's Ducts.
- Fig. 5. Chancre of right labia.
- Fig. 6. A large cystocele or hernia of the structures supporting the bladder. This cannot be cured by the usual perineal repair. It can be corrected by suturing the torn pubocervical fascia layer.
- Fig. 7. This discoloration should suggest trichomonas vaginalis infection of the vagina.
- Fig. 8. The "salt and pepper" vagina that may result from trichomonas vaginitis.
- Fig. 9. A complete (third degree) tear or laceration of the perineum, following delivery. The herniated bladder is bulged down from above; the rectocele bulges up from below.
- Fig. 10. Condylomata acuminata due to gonorrhea.
- Fig. 11. Monilia albicans vaginitis during pregnancy.
- Fig. 12. Chronic monilia albicans infection of the labia.



CLINICAL NOTES and ABSTRACTS

Cystic Disease of the Lungs*

CYSTIC DISEASE of the lungs may be congenital or acquired. Definition: "A sac or cyst in the lung area not occupied by alveoli or other normal lung tissue."

Classification	
Congenital	Acquired
1. Solid or liquid containing	1. Tuberculous cavities
2. Air containing	2. Coccidiomycotic
	3. Parasitic cysts
	4. Lung abscess
	5. Bronchiectatic cavities
	6. Emphysematous bullae

Congenital cysts are often (1) lined with bronchial epithelium and their wall contains such bronchial material as cartilage and muscle, (2) traversed with strands of lung tissue and (3) found in young persons (children, even in the fetus). These points are not absolute as one or all may be found in acquired cysts. There is usually less lung reaction around a congenital cyst.

Acquired cysts are formed by dilatation and excavation. An epithelial lining or inflammatory membrane may compose their innermost membrane.

Tuberculous cavities, parasitic cysts and coccidiomycotic cysts are differentiated from congenital cysts by skin tests and by serological tests which help to rule out echinococcus and coccidiomycotic infections.

The differentiation of lung abscess, bronchiectatic cavities and emphysematous bullae may be very difficult. The x-ray is of great value.

A cyst may show dimensions larger than those of a bronchiectatic cavity and the bronchi entering it are often of normal size. Cysts often occupy the mid-

dle and upper lobes. Acquired cysts are rare in infants.

But inflammation may destroy the cyst wall and its epithelial lining, a lung abscess may become chronic and become lined with epithelium and a bronchus may be larger or smaller than normal in a cyst. Some authorities believe that a congenital cyst can only be suspected, except in a child with an infected cyst.

Summary

The differential diagnosis between a congenital and acquired cyst is not too important as the treatment is the same. The threat to life or damage to lung tissue must be recognized.



Adenoid Bronchosinusitis in Infants

Adenoid bronchosinusitis develops as a complication of a cold. The infected adenoid tissue and nasal sinuses produce a purulent discharge that obstructs the nose, descends into the trachea (resulting in cough, for which the patient and the physician both may think that cough medications are indicated, without realizing the cause — Ed.) and into the bronchi, resulting in bronchitis. **Etiology:** pneumococcus, staphylococcus aureus, beta hemolytic streptococcus. Leukocytosis and elevated sedimentation rate persist even in periods between the exacerbations. **Season:** September to March. **Age:** 1 to 8 years.

Symptoms: Child "has never fully recovered from a cold;" nasal obstruction and "snoring" at night; cough, especially nocturnal; poor color; failure to gain weight; attacks of tonsillitis, cervical adenitis and otitis. **X-ray:** A soft tissue film of the nasopharynx (40 inches distance, 1/60th second, 200 milliamperes,

*Abstracted from a paper given by Major Robert Liggett, M.C., U.S.A., Fitzsimons General Hospital, Denver, Colorado, before the American College of Chest Physicians, Colorado Members, Sept. 27, 1944.

65 kilovolts, for 2 years old child) indicates enlarged adenoid tissue. *Treatment:* 3 day course of sulfadiazine at home (1 gr. per pound of body weight, plus 1 gr. of sodium bicarbonate), together with 2 to 3 ounces of fluid per pound of body weight. Scanty or bloody urine or skin eruption should be watched for by parents. Tonsillectomy and adenoidectomy follow, followed by local application of sulfadiazine. Sulfadiazine is continued for 3 days more.—S. H. CLIFFORD, M.D. in *Med. Clin. N. Am.*, Sept. 1944.

Allergy: Questions and Answers

1. *Are the diagnostic skin tests infallible?* The diagnostic skin tests in allergy are often of great aid in diagnosis, but may have no clinical significance whatever unless confirmed by the elimination test. The baby with eczema whose skin reacts to cow's milk should be studied by the withdrawal (for a week) and then the restoration of cow's milk to the diet.

Twenty eight babies with severe eczema were studied; each was found to be sensitive to milk, egg or other common food, yet in only 3 cases did elimination of the food produce a convincing clinical change.

The normal infant, on his first contact with a new food protein, develops antibodies to that food which persist for weeks or months. Such antibodies, and their resultant positive skin tests, do not indicate food sensitivity and the need for eliminating the food in question.

Of a large group of normal medical students, without an allergic history and without allergic symptoms, 70 per cent showed a positive skin reaction to one or more common antigens.

2. *In treating infantile eczema, what other factors are of value?*—There are several contributory causes, all of which should be attacked. The infant's skin is sensitive to too many non-specific irritants (scratching, soap and water, clothing irritation). Cellophane coverings to the bedding are valuable.

A vanishing cream containing 5 per cent liquor carbonis detergens is an effective local treatment. Sulfadiazine should be incorporated into the local application because infection is probably a factor of importance in all cases of eczema, even though its presence is not obvious (there is some degree of infection resulting from growth of skin staphylococci).

Systemic therapy is bettered by not giving supplementary carbohydrate foods; use a high fat diet, such as a top

milk formula, which causes elimination of water from the body and loss of weight. Overfeeding should be avoided.

3. *What is summation in allergy?* This is a topic that has received little mention in books but is important in understanding variations in allergic symptoms and also in treatment.

An individual is mildly sensitive to antigen A and mildly sensitive to antigen B, but very sensitive to the two together.

I have a patient who is mildly sensitive to shrimp and also to ragweed, either of which result in a few hives and moderate nasal congestion. If he eats shrimp in the ragweed season, he has a severe reaction.

Allergists claim 70 to 90 percent of hay fever patients benefit from the perennial injection of pollen extracts, if such treatment is persisted in for a number of years.

Allergies wax and wane spontaneously: I am sure that many of these cases would have shown an equal improvement without therapy.

Vitamin C (ascorbic acid) is not of proved value. We have seen some favorable responses with lemon juice, but it is possible that these may have been due to some constituent of the juice other than the ascorbic acid.—L. E. HOUR, JR., M. D.—*J. Omaha Mid-West Clin. Soc.*, Aug. 1944.

Simple Plaster of Paris Technic

The war has brought increased interest and demands for the use of plaster of paris. In my experience the use of "plaster towels" made up of old rags, towels and sheets and impregnated with plaster pie as recommended by F. Calot—Paris in 1926 is a great improvement because it saves time, is less expensive and is more durable and elegant. I am using it in various orthopedic hospitals after spine and hip operations which require especially fast and reliable plaster protection.

Discarded regular size towels, rags, four layers of crinoline or any rough texture material measuring 15 by 20 inches for posterior shells and hip spicas or 5 by 20 inches for arm or leg splints, after being wrung out in warm water, are soaked in homogeneous plaster of paris pie (ratio 6 cups of powder to 4 cups of lukewarm water), adapted to the body contour and molded snugly. While the hardening plaster pie is renewed after six to eight layers they can be reinforced by one 6 inch plaster bandage and molded until the "critical

point" of setting is reached. More layers are added, usually up to twelve, until the necessary strength is reached. The edges can be trimmed the following day, and the shell is padded and covered with stockinet. ERNEST H. BETTMANN, M.D. New York, N. Y.

Exposure of Recurrent Laryngeal Nerves in Thyroidectomy

Exposure of the recurrent laryngeal nerves during thyroid surgery is practiced routinely at Lahey Clinic. In approximately 10,000 recurrent laryngeal nerve dissections, it was found that the nerve withstands dissection, handling, benign tumor pressure, and sometimes inclusion in a malignant process without losing its ability to conduct the impulses that produce the necessary position changes in the cord for breathing and speech. The most essential factors for demonstrating the recurrent laryngeal nerves are adequate surgical exposure, a dry field, and good light. Secondary suture of cut or injured recurrent laryngeal nerves is unsatisfactory because the cords become atrophied and the arytenoid muscles fixed between injury and secondary repair. If the vocal cords remain immobile 10 days after an operation, restoration of their integrity should be attempted by reopening the neck and suturing the injured nerves.—F. H. LAHEY, M.D. in *Surg. Gynec. Obst.*, Mar. 1944.

Differential Diagnosis of Glycosuria

From the clinical view-point, finding a glycosuria brings up two questions. Is this a diabetic or non-diabetic glycosuria? If diabetic in origin, immediate attention and intervention is indicated. However, if the glycosuria is non-diabetic, there is no problem.

A rapid and simple differential diagnosis of glycosuria can be done in the office — Say that sugar is found in the urine at 9 a.m. Direct the patient to eat a heavy carbohydrate lunch and note the exact time he started eating — Two and one-half hours later the patient should report to the office and have a 2 cc. blood sample taken. Coagulation can be prevented by the mixing of a pinch of sodium or potassium oxalate with the blood sample. Submit the sample to a laboratory for blood sugar determination. If the blood sugar is below 120 mg. per cent, the patient is not a diabetic. If the blood sugar is 126 or 136 mg. per cent, a glucose tolerance test should be done the next morning. The resulting

curve will give the practitioner a definite answer.

If the blood sugar is well above 120, say 200 or more, the patient is a frank diabetic. In this last instance, a glucose tolerance test will give no additional information.

Upon the finding of glycosuria, a diagnosis should be arrived at without delay (within twenty-four hours). This will eliminate the possibility of self-imposed dietary restrictions which distort the glucose tolerance curve (toward the diabetic side) and thus give false information.—COL. H. J. JOHN, in *Amer. Digest. Dis.*, Oct. 1944.

Glomus Tumors

Severe, neuralgia-like, radiating pain, especially if it originates in a finger, may be due to a glomus tumor. These benign lesions are often extremely small, and are not easily visualized, unless, as in those located subungually, their purplish color is visible. Their site may be determined with a steel pin, since pressure as little as 1 cm. away from the lesion is not very painful, while pressure directly over it produces a characteristic attack of excruciating pain. Treatment of choice is complete surgical excision with a small amount of 1% procaine-HCl injected at the site of maximum tenderness and local block anesthesia some distance from the tumor. The needle for a direct injection into the tumor is left in place as a marker, since injection of an anesthetic, particularly if it contains epinephrine, in or around the tumor will result in fading and difficulties of identification.—J. G. LOVE, M.D., in *Proc. Staff Meet. Mayo Clinic*, Mar. 8, 1944.

Treatment of Sore Throat

The sulfonamide drugs given orally are recognized as the most valuable single measure for severe infectious sore throats.

Throat irrigations can be carried out at home by the patient. A level spoonful of salt is put into a quart of boiled water. When cool enough to pour on the finger, it is ready to use. A sterilized douching apparatus, with the level of the saline solution container not more than 1 foot above the level of the mouth, is used to irrigate the throat. The patient leans forward and holds his breath as he releases the solution into his throat, from which it flows by gravity into a receptacle.

Hot flaxseed poultices applied to the neck every 2 hours for 20 minutes

give comfort, after applying vaseline to the throat to prevent a burn.

Gargle:

R Phenol 4 cc. (dr. i)
Zinc sulfate 8 gm. (dr. ij)
Glycerine 60 cc. (℥ ij)
Distilled water q.s. ad 240 cc. (℥ viij)
Mix and make a solution.

Sig.: ½ teaspoonful in ½ glass hot water every 2 hours for gargle.

Spray: R 2.5% sulfadiazine in 8% triethanolamine in distilled water 60 cc. (℥ ij).

—F. L. WELF, M.D. in *Med. Clin. N. Am.*, Sept. 1944.

Ectopic Pregnancy

The type of pelvic pain complained of may be cutting, cramping, knifelike, boring, or dull aching in character. In the majority of cases, one type of bleeding or another precedes the pain. There may be referred pain present in cases of profuse intraperitoneal hemorrhage. In most cases this pain is referred to the interscapular area, the costal margins, down the thighs, to the retrosternal area and to the base of the neck. Fainting at some time or other may occur.

—DRS. REICH and SILVERMAN in *North West Med.*, Sept. 1944.

Spinal Puncture Headaches Are Rare

Spinal puncture headaches are rare, when the puncture is performed with a small needle (not larger than gauge 20) and not more than 10 cc. are removed. The patient is told not to rest or "take it easy," but to carry on with his usual day's activities. Headache occurred only 15 times in 2,217 lumbar punctures on ambulatory patients. — M. J. LEVIN,

M. D. in *Bull. U.S. Army Med. Dept.*, Nov. 1944. (In a similar experience on luetic candidates for induction into the armed forces at a Marine Hospital, we found only one headache severe enough to cause the selectee to return to the hospital in a group of 350 consecutive punctures. Many reports have shown that spinal puncture is a safe office procedure, except for cerebral injury or tumor. Many physicians apparently are not aware of the fact that persons with positive blood Wassermanns are inducted into the Army if their spinal fluid serologic test is negative.—R. L. G.)

Carbon Dioxide in Controlling Cough

The administration of a mixture of 10-per cent carbon dioxide and 90 per cent oxygen by inhalation is a safe and feasible procedure. Analytic studies and clinical experience show that carbon dioxide by inhalation is an efficient expectorant. Its liquefying effect upon mucopus in the bronchial tract is greater than that of the commonly used expectorants.

Carbon dioxide by inhalation occupies a unique place among expectorants in that—besides its liquefying action—it is capable of stimulating the respiratory center. Stimulation of the respiratory center causes increased respiratory expansions of the thorax, a consequent stretching and dilation of the bronchi, and an increase in the bronchial peristalsis. These factors contribute substantially to the effective mechanical elimination of inflammatory products from the respiratory tract. BANYAI A. L., and CADDEN, A. V.: *Brit. J. Tuberc.*, Oct. 1944.

Treatment of Angina Pectoris

Drug	Dosage	Frequency
Glyceryl trinitrate	1/400 gr. (0.16 mg.)	Every hour
Therobromine and sodium acetate	7½ gr. (0.5 Gm.)	Four times daily
Quinidine sulfate	3 to 5 gr. (0.2 to 0.32 Gm.)	Four times daily
Atropine sulfate	1/150 gr. (0.4 Gm.)	Four times daily
Potassium iodide (enteric coated)	15 gr. (1 Gm.)	Four times daily
Cobra venom	Intramuscular administration	
Sedatives	Given in appropriate doses	
Total thyroidectomy	Valuable in selected patients	
Alcohol injection (into sympathetic paravertebrally)	Gives symptomatic relief	

—J. E. F. RISEMAN, M.D. in *New Eng. J. Med.*, Oct. 28, 1943



THUMBNAIL

THERAPEUTICS

Safe Protein Intravenously

• The surgical and medical patient who cannot take protein foods can be nourished and kept in protein balance by the intravenous injection of amino acids (Sterns) or Amigen (Mead Johnson) and glucose. Hypoproteinemia can be corrected. Amino acids are inexpensive in comparison with plasma or blood transfusion. One vial of Amigen will supply 50 Gm. of amino acids whereas a 500 cc. transfusion will supply but 15 Gm.—A. R. CURRIER, M.D. in *June, 1944, Wisconsin M. J.*

Protecting the Perforated Drum

• Water must be kept out of the perforated drum. Olive oil on cotton wool in the concha and outer canal, plus several bathing caps, may accomplish this purpose. These may also prevent external otitis, furunculosis, otomycosis, and exacerbations of "dry" into "weeping" eczema.—F. L. WELLS, M.D. in *M. Clin. North America, Sept. 1944.*

Sulfadiazine Injection for Infants

• Subcutaneous injection of sodium sulfadiazine does not cause reactions. The initial dose for bronchitis is 0.06 to 0.08 gm. per kg. of body weight ($\frac{1}{2}$ to $\frac{3}{4}$ gr. per pound), followed in 8 hours by 0.04 gm. per kg. of body weight ($\frac{1}{2}$ gr. per pound) every 8 hours until the drug can be taken orally.—E. L. PRATT, M.D. (Harvard Medical School), in *M. Clin. North America, Sept. 1944.*

Retinal Hemorrhage in New-Born

• Give 50 cc. of maternal or paternal blood (after grouping) intravenously, or 10 cc. into the buttocks, twice daily for two or three days. Inject intramuscularly vitamin K (5 mgm. in 1 cc.) and repeat if there is a deficiency of prothrombin.—E. E. N. T. M., Oct. 1943.

Senile Pruritis

• Senile pruritis, in men or women, responds to treatment with methyl testosterone or stilbestrol (male or female sex hormone). It is a definite deficiency disease.—A. R. ABARBANEL M.D. in *J.A.M.A., Feb. 17, 1945.*

Decubitus Ulcers (Bed Sores)

• After the injection of 100,000 units of penicillin over a period of 24 hours, decubitus ulcers and the granulation tissue can be excised, the surrounding skin undermined and sutured over the area. Penicillin solution should be injected into the surrounding subcutaneous tissues.—J. D. LAMON, Jr., M.D. in *J.A.M.A., Feb. 15, 1945.*

Episiotomy

• A unilateral episiotomy should not be performed as a routine procedure in normal labour but is indicated in a few cases when there appears to be some atresia of the vaginal outlet, and in certain cases of forceps delivery, e.g. in a case of occipito-posterior position when manual rotation has been performed.—*Am. J. Surg., July 1944.*

Fatigue and Smoking

• Fatigue is marked in some individuals after smoking; this also varies from time to time in the same individual. I have frequently measured it in patients by having them climb twelve steps. They are below par; most of the weakness is manifest in the flexor muscles of the thigh.—D. G. CHAPMAN, M.D. in *Va. M. Monthly, May, 1944.*

Acute Bronchitis in Infants

• Spasm of the bronchi is often present in acute bronchitis of infants. Aminophylline (theophylline ethylenediamine) given with dextrose intravenously will often dramatically relieve the spasm. Dosage: 1/20 gr. per pound (0.006 gm. per kg. body weight).—E. L. PRATT, M.D. (Pediatrician, Harvard Medical School) in *M. Clin. North America, Sept. 1944.*

Pyridoxine for

Agranulocytic Angina

• Pyridoxine (vitamin B₆) has been used to counteract the toxic effects of sulfathiazole, aspirin and thiouracil (the new chemical used in treating hyperthyroidism). Agranulocytic angina caused by these three has been successfully treated by pyridoxine, which apparently stimulates the myelocytic elements of the bone marrow.—M. M. CANTOR, M.D. in *Science News Letter, Jan. 6, 1945.*



DIAGNOSTIC POINTERS

Bed Rest and Kidney Stones

• Patients who must rest in bed for a long period have a tendency to develop kidney stones (fractures of the spine or extremities, chronic osteomyelitis, chronic arthritis, spinal cord injury or other trauma).

Prevention: The patient should be moved from side to side and from his front to his back to avoid the precipitation of crystalloids in the pelvis of the kidney. Urinary infection is treated with sulfacetamide, sulfathiazole or sulfadiazine. Sufficient liquids are given to maintain a urinary output of 1,500 to 2,000 cc. Large doses of vitamin A are given during the period of bed rest and for many months thereafter. A low calcium, neutral ash diet is given.—R. H. FLOCKS, M.D. in *Clinics*, April, 1945.

Neurosis vs. Organic Disease

• Latent cancer, obscure anemia, mild hyperthyroidism, incipient tuberculosis or brain tumor may not show definite organic signs and may mask themselves under "neurotic symptoms." A truly neurotic patient can develop organic disease which may be overlooked in view of the previously established diagnosis.—"Text-book of Medicine" by R. L. CECIL, M.D.

Positive Wassermann After Vaccination

• Smallpox vaccination may cause a positive Wassermann (or other serologic test for syphilis), to persist for 1 to 4 months.

False positive tests may occur in persons who show no evidence of any complicating state.—C. R. REIN, M.D. in *Am. Jour. Syph.*; May, 1945.

Significance of Diarrhea

• "Simple diarrhea" is the usual manifestation, rather than classical dysentery symptoms, resulting from *shigella paradyserteriae* infections. — A. V. HARDY, M.D., in *Pub. Health Reports*, May 11, 1945.

Ulcerative Colitis Followed by Cancer

• Carcinoma of the intestinal tract not infrequently follows chronic ulcerative colitis.

Symptoms: The new symptoms consist in progressive loss of weight, abdominal or rectal pain and cramps differing from the distress usually associated with colitis, an increased number of stools and an increase of blood in the stools, weakness and occasionally signs and symptoms of intestinal obstruction.—J. A. BARGEN, M.D. in *Clinics*, Oct. 1944.

Bad Breath

• A bad breath seldom facilitates diagnosis, but there is a smell of malignancy in the gastric contents of persons with cancer of the stomach.

Gastric Acidity Variations

• Studies of normal gastric acidity show far greater variations than are listed in standard textbooks.

The same normal subject shows considerable variation in acidity, as shown by repeated analyses, carried out at intervals of a few days.—C. S. SMITH, M.D., in *Am. J. Dig. Dis.*, April 1945.

Pulmonary Tuberculosis vs. Carcinoma

• Tuberculosis of the lung and bronchiogenic carcinoma are easily confused, since clinically they resemble each other. The possibility of cancer must be given special consideration, if the patient is a male between 40 and 60 years of age.

If physical and x-ray examination does not permit a definite diagnosis of tuberculosis, bronchoscopy should be performed at once. Bronchoscopy is also of value in tuberculosis as it may disclose bronchial involvement and thus alter therapy.—N. R. PILLSBURY, M.D., in *New Eng. J. Med.*, Mar. 8, 1945.

Refractory Anemia

• Nicotinic acid, plus parenteral liver extract and vitamin B complex, will cure many refractory anemias.—N. ALTMAN, M.D., in *Indian Med. Gazette*, Sept. 1944.

Atabrine and Eosinophilia

• Atabrine in large doses often results in eosinophilia. — *Naval Med. Bull.*, March, 1945.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

CORRELATIVE NEUROANATOMY

CORRELATIVE NEUROANATOMY. By Joseph J. McDonald, M.S., M.D., John R. Green, B.S., M.D. and Jack Lange, B.S., M.D.—University Medical Publishers. 1944. \$2.50.

As its name implies, this very usable, loose leaf text shows the relationship between the anatomy of the nervous system and clinical symptoms resulting from pathologic changes.

If only this volume had been available when we were struggling through neuroanatomy and through neurology! At any rate, it is a Godsend to the students of today.

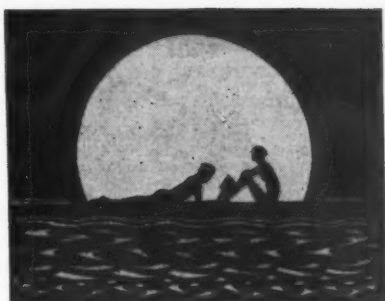
For those in practice, it offers quick, brief descriptions of lesions producing any sign or symptom exhibited by your patients. For those who wish to know more about the neuroanatomy involved, brief descriptions and clear illustrations are given. On one page, radial nerve lesions are shown pictorially, with the typical wrist drop, the area of sensory distribution, and the course of the radial nerve, so that one may visualize the course of the nerve and the possibility of its injury.

BIOCHEMISTRY Koch and Hanke

PRACTICAL METHODS IN BIOCHEMISTRY. By Frederick C. Koch, M.D., Director of Biochemical Research, Armour & Co., Chicago, and Martin E. Hanke, M.D., Associate Professor of Biochemistry, University of Chicago.—The Williams & Wilkins Company, Price, \$2.25.

Since 1934 and approximately every three years thereafter, "Practical Methods in Biochemistry" by F. C. Koch and M. E. Hanke has been revised. Originally intended as a laboratory manual to be used in conjunction with a textbook in biochemistry, the fourth revised edition is now an excellent working manual for the newer and more complicated bio-chemical procedures.

The first part, devoted to the chemistry of cell constituents, deals with the theoretical aspects of carbohydrates, lipins and proteins and the simple tests for their identification. The second part deals with the chemistry of the digestive tract and discusses salivary, gastric and intestinal digestion together with practical procedures for enzymic detection. Thus, the first two parts of the book would be of great interest to the medical students of biochemistry, and they would be particularly grateful for the newly revised chapter on the hydrogen ion concentration presenting its detailed theoretical background and the various chemical and electrometric methods employed



for its determination. The third part of the book deals with the quantitative analysis of blood and urine. These chapters are mainly for hospital laboratory personnel. Many of the methods are only for the experienced chemist.—I. J. W.

PICTORIAL HANDBOOK OF FRACTURE TREATMENT

Compere and Banks

PICTORIAL HANDBOOK OF FRACTURE TREATMENT. By Edward L. Compere, M.D., F.A.C.S., Associate Professor of Surgery, Northwestern University Medical School, and Sam W. Banks, M.D., Associate in Surgery.—The Year Book Publisher, Price \$4.25.

Dr. Harold Laufman has contributed many illustrations which show how each fracture appears anatomically and step-by-step methods of reduction. The authors have worked up brief descriptions of the technics appropriate for each injury. Clinical photographs show the application of splints and casts.

The proper application of a simple figure of eight plaster bandage for the retention of clavicle fractures is well shown. This method of treatment should supplant older, less efficient methods such as the clavicular cross on which a few patients are still crucified.

MEDICAL DISEASES OF WAR

Hurst

MEDICAL DISEASES OF WAR. By Sir Arthur Hurst, M.A., D.M., F.R.C.P., Consulting Physician, Guy's Hospital, Lecturer, Clinical Medicine, University of Oxford. With the cooperation of H. W. Barber, M.A., M.B., F.R.C.P., Melville D. Mackenzie, M.D., D.T.M., and H. H.B.F. Dixon, M.C., M.D., E.H.R. Harries, M.D., F.R.C.P., D.P.H., F. A. Knott, M.D., F.R.C.P., and Arnold W. Scott, M.A., F.R.C.P.—The Williams & Wilkins Company. 1944. Price \$6.00.

A very interesting volume summarizing the experience of a number of English observers on medical diseases as encountered in World War I and II.

Tropical diseases and infectious hepatitis are very well covered. Psychoneuroses and hysterical symptoms and signs are well differentiated. The senior author's statement that hysterical signs may disappear after one half-hour session of psychotherapy and reassurance makes one wish he had given details. Most medical officers have seen nothing either that speedy or that effective.

GALLBLADDER AND BILE DUCTS

Weiss

CLINICAL LECTURES ON THE GALLBLADDER AND BILE DUCTS. By Samuel Weiss, M.D., F.A.C.P.—The Year Book Publishers, Inc. 1944. \$5.50.

The author is clinical professor of gastroenterology, New York Polyclinic Medical School and Hospital. His views are sound and based on good clinical judgment.

Words and illustrations describe the anatomy and physiology of the gallbladder and the biliary ducts, correlating them with clinical symptoms.

Physical examination, x-ray examination, how to take a history of diagnostic value, cholecystitis, cholelithiasis, choledocholithiasis, acute cholecystitis and its complications, all and more are presented briefly, forcefully and clinically.

MY SECOND LIFE

Shastid

MY SECOND LIFE: AN AUTOBIOGRAPHY. By Thomas Hall Shastid, M.D.; A.M., LL.B., Sc.D., Ann Arbor, Michigan: George Wahr. 1944. \$10.00.

Here are presented many anecdotes concerning the growing up and adulthood of a physician who enjoyed life to the fullest, who had an unusual physician for a father and who had a tremendous memory for events and incidents. Much historical detail is included.

The author, who has written more than 17 other books, writes in a leisurely, detailed manner typical of an age with ample time. Much of the description and events involve the people of Pike County, Illinois.

Any physician may well be interested; those who have practiced in small towns will certainly be.

SURGICAL TREATMENT

Illingworth

TEXTBOOK OF SURGICAL TREATMENT, Including Operative Surgery. Edited by C. F. W. Illingworth, M.D., Ch.M., F.R.C.S.E., Regius Professor of Surgery, University of Glasgow.—The Williams Company. 1944. \$9.00.

This book may be well recommended for students and internes interested in surgery. It is well illustrated and covers a variety of conditions they may encounter: (pre- and post-operative care, wounds and wound infections, the treatment of burns, amputations, affections of blood vessels, skull and brain, spine and spinal cord, peripheral nerve injuries, autonomic nervous system surgery, bone diseases, joint diseases, tuberculosis of bone and joints, paralysis and contracture, fractures, affections of each organ and part of the body considered separately).

The chapter on treatment of burns is especially to be recommended.

MEDICINE AND SURGERY

Rehberger

QUICK REFERENCE BOOK FOR MEDICINE AND SURGERY. By George E. Rehberger, A.B., M.D.—J. B. Lippincott Company. 1944. \$15.00.

This is the 12th edition of an extremely practical reference book for the entire medical profession. The binding and paper are of good quality. The numerous illustrations and full

colored plates are well done. General medicine, surgery, and the specialties make up the sections which can be found readily and quickly with the thumb index.

The general practitioner or specialist can use this book for a quick reference and in a few minutes obtain a concise and compact account of almost any clinical entity with its modern treatment. During the past 4 years since the previous edition there have been many new developments in the field of medicine. All sections show that they have been revised since the last printing. This reference book comes as close to being a one volume medical library as any in the field.—J. W.

OSTEOPATHIC TECHNIC

HANDBOOK OF OSTEOPATHIC TECHNIC.

By The Staff of the Department of Osteopathic Technic, College of Osteopathic Physicians and Surgeons and enlarged and revised by Harold E. Litton, D.O., Professor of Osteopathic Principles and Technic.—College of Osteopathic Physicians and Surgeons. 1944. \$4.00.

A brief, fact filled book showing in text and photographs the various technics, both in soft tissue and osseous lesions. It is very helpful to have an illustration showing the bony part under treatment or the x-ray showing the condition to be treated immediately next to the photograph showing the technic.

AVITAMINOSES

Eddy and Dalldorf

AVITAMINOSES: The Chemical, Clinical and Pathological Aspects of the Vitamin Deficiency Diseases. By Walter H. Eddy, Ph.D., Emeritus Professor of Physiological Chemistry, Teachers College, Columbia University, and Gilbert Dalldorf, M.D., Pathologist of the Grasslands and Northern Westchester Hospitals, Westchester County, New York.—The Williams & Wilkins Company. 1944. Price, \$4.50.

This book gives a comprehensive discussion of the subject of vitamins and the avitaminoses. In Part I, the chemistry, function and requirements of the vitamins are considered. There is an excellent chapter on vitamin behavior which explains clearly some of the basic principles of cellular oxidation and respiratory enzymes.

Part II deals with the avitaminoses. The historical background of each of the deficiency diseases is presented and the experimental and clinical research leading to our present concepts are discussed. Controversial subjects are critically evaluated. Symptoms and signs of mild and severe vitamin deficiency are indicated and correlated with the pathologic changes that occur. The illustrations of pathologic findings are excellent. A few more illustrations of clinical signs, and more detail concerning treatment would be of assistance to the practicing physician.

In Part III, vitamin assay methods and a few laboratory tests are considered. The bibliography is carefully chosen and includes a number of recent publications. Tables giving the vitamin content of foods are included in the appendix.

The book is scholarly, up to date, and contains more useful information to physicians interested in nutritional problems than any other single book that this reviewer has seen.—G. G.

The First Step

In the Management of Many Cutaneous Affections

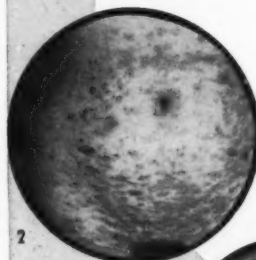
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